



Technical Assistance Report

Project Number: 42112
Regional Research and Development Technical Assistance (RDТА)
December 2008

Capturing and Transferring Air Quality Management Knowledge in Asia

(Financed by the Japan Special Fund)

ABBREVIATIONS

ADB	–	Asian Development Bank
AQM	–	air quality management
ASEAN	–	Association of Southeast Asian Nations
CAI-Asia	–	Clean Air Initiative for Asian Cities
COP	–	community of practice
DMC	–	developing member country
GHG	–	greenhouse gas
ICT	–	information and communication technology
SUT	–	sustainable urban transport
TA	–	technical assistance

TECHNICAL ASSISTANCE CLASSIFICATION

Type	–	Regional research and development technical assistance (RDTA)
Targeting Classification	–	General intervention
Sectors	–	Multisector (transport and communications, energy)
Subsectors	–	Multimodal transport and sector development; ports, waterways, and shipping; renewable energy generation
Themes	–	Governance, environmental sustainability, regional cooperation
Subthemes	–	Urban environmental improvement; cleaner production, control of industrial pollution; global and regional transboundary environmental concerns and issues

NOTE

In this report, "\$" refers to US dollars.

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I. INTRODUCTION

1. Air pollution in Asian cities is a growing concern because of rapid urban development and increased motorization. The World Health Organization estimates that air pollution causes 530,000 premature deaths every year in Asia and millions of dollars in economic losses.¹ While information and knowledge on air quality management (AQM) are increasingly generated in Asia to address this problem, the capture and transfer of this knowledge to policy makers in developing member countries (DMCs) is far from adequate, resulting in investment decisions that are not always based on sound science and international best practice. This technical assistance (TA)² responds to DMCs' demands and the operational needs of the Asian Development Bank (ADB) to improve knowledge transfer and knowledge sharing on air quality management in the region.³ It supports the Millennium Development Goal on environmental sustainability.⁴ Furthermore, the knowledge-management activities in this TA support ADB's efforts to bridge the gaps in knowledge among developing countries to enable poverty reduction and the fostering of knowledge development, as called for in ADB's long-term strategic framework 2008–2020 (Strategy 2020)⁵ and Knowledge Management Strategy.⁶ The TA will support a co-benefits approach to climate change mitigation in line with the general aims of the Asia-Pacific Gateway to Climate and Development and the Cool Earth Partnership.⁷ The design and monitoring framework is in Appendix 1.

II. ISSUES

2. ADB recognizes the importance of knowledge brokering in fighting poverty and fostering development and has proposed three strategic thrusts in its policy paper *Toward E-development in Asia and the Pacific: A Strategic Approach for ICT*: (i) creating an enabling environment by fostering the development of innovative sector policies, strengthening public institutions, and promoting the development of information and communications technology (ICT) facilities and related infrastructure networks; (ii) building human resources; and (iii) developing ICT applications and content.⁸

3. Air quality has either improved slightly or remained stable over the past decade in many Asian cities, notwithstanding continued growth in urban population, energy use, greenhouse gas (GHG) emissions, and motorization. Progress so far in AQM usually results from the application of across-the-board policy measures that have been tested in many other countries worldwide, such as banning leaded gasoline and introducing cleaner fuels and vehicles. For policy makers and other stakeholders in Asian cities to make further progress in air quality management, they will need (i) better capacity to develop and implement locally designed strategies and (ii) better access to international and regional knowledge and experience of AQM.

¹ Krzyzanowski, Michal. 2006. Why we need better air quality? Keynote presentation for *Better Air Quality Workshop*, 13–15 December 2006. Yogyakarta, Indonesia.

² The TA first appeared in the business opportunities section (Other Notices) of ADB's website on 2 July 2008.

³ "Technological development and knowledge management activities should pool regional know-how, with the Bank as a platform for knowledge-sharing, rather than as a primary source of knowledge." *Toward a New Asian Development Bank in a New Asia: Report of the Eminent Persons Group to the President of the Asian Development Bank*. March 2007.

⁴ Millennium Development Goal 7, Target 9: "Integrate the principles of sustainable development into country policies and programs and reverse the loss of environmental resources."

⁵ ADB. 2008. *Strategy 2020: The Long-Term Strategic Framework of the Asian Development Bank 2008–2020*. Manila. Available: <http://www.adb.org/LTSF/default.asp> and <http://www.adb.org/LTSF/background-note.pdf>

⁶ Available: <http://www.adb.org/Documents/Policies/Knowledge-Management/km0100.asp>

⁷ Available: <http://www.ap-net.org> and <http://www.mofa.go.jp/policy/economy/wef/2008/mechanism.html>

⁸ Available: <http://www.adb.org/Documents/Policies/ICT>

4. Internet usage is increasingly mainstreamed across the international community and in developing countries and cities in Asia as an indispensable communications medium for policy making.⁹ The accelerated growth of broadband Internet access in Asia has brought a sharp increase in the availability of AQM information. Yet this information is fragmented across different websites. Better ways to transfer this knowledge to its intended audience and ensure that it is actually applied by AQM policy makers are required.¹⁰

5. While knowledge management and ICT tools show great potential, challenges need to be addressed with respect to its relevance to AQM in Asia. Multilateral and international organizations need to (i) address the current ad-hoc approach to knowledge management and transfer in AQM; (ii) identify the knowledge demands and preferred mechanisms to access the information; (iii) develop a portal to provide policy makers and other stakeholders with easy access to relevant AQM and related information in an organized and interactive manner; (iv) build social networks to share knowledge among cities, national governments, nongovernment organizations, research institutions, and the private sector; and (v) enhance stakeholders' use of ICT for knowledge transfer and capacity building.

III. THE TECHNICAL ASSISTANCE

A. Impact and Outcome

6. The impact of this TA is air pollution in Asia further reduced through improved formulation and implementation of urban development, clean energy, and sustainable transport policies regionally, nationally, and locally. The outcome of this TA is policy makers and the stakeholders who influence decisions in Asia gaining better access to AQM knowledge and more effectively managing it to further policy development.

7. The TA will have the following outputs: (i) information from a regularly maintained AQM website is incorporated in government policy documents and (ii) AQM communities of practice provide an effective forum for stakeholders to share knowledge and good practices in AQM and contribute to building the capacity of policy makers and strengthening policy development processes.

8. The scope of the TA covers (i) DMCs, especially in east, southeast, and south Asia (excluding Central Asia and the Pacific), with the target DMCs identified at the inception stage of the TA in consultation with regional departments; (ii) policy makers and other stakeholders who influence decisions in Asia;¹¹ and (iii) air quality in relation to urban development, clean energy, climate change and sustainable transport topics, and, to some extent, transboundary and indoor air pollution.

⁹ The 2007 World Economic Forum in Davos, with over 2,400 participants, allowed for the first time the use of video blogs and webcasts for a more transparent and participatory approach to decision making. The World Economic Forum launched a website to engage the world in the process. Available: <http://www.davosconversation.org>

¹⁰ Several AQM projects have large data sets relevant to policy makers but need to be disseminated more widely. Examples include the Public Health and Air Pollution in Asia Program, which has built a large body of health-related information, and the Asian Regional Research Programme on Environmental Technology, which has collected over 10,000 data sets while drawing up emission inventories and conducting source-apportionment studies.

¹¹ The TA's target group within ADB consists of all staff involved in implementing the Clean Energy and Environment Program, as well as other staff working on projects related to air quality.

B. Methodology and Key Activities

9. The TA will focus on the collection, capture, analysis, synthesis, and transfer of AQM knowledge for the benefit of policy makers and will include linkages with urban development, cleaner energy, climate change co-benefits, and sustainable transport. The TA will run from January 2009 to October 2010, with regional, national, and local activities. The continuation of activities will be sustained beyond October 2010 through the communities of practice (COPs) and the Clean Air Initiative for Asian Cities (CAI-Asia) Center.

10. The following activities are planned in support of the two outputs:

- (i) **Maintenance of an AQM knowledge portal.**¹² The TA will establish an online portal to capture, analyze, synthesize, and disseminate knowledge tailored to the needs of government policy makers in AQM and GHG mitigation and of other stakeholders who influence their decisions. Consultations and surveys will be conducted to determine the needs of the AQM community, the information most relevant to them, and their preferred methods of sharing knowledge.¹³ The website will create an enabling environment for collaboration and knowledge creation and transfer among and on behalf of stakeholders, including government and AQM professionals. The TA aims for this knowledge to be integrated into government policy documents. The website will further the development of an integrated online database, CitiesACT (for air, climate, and transport), which consists of key national and city data on demographics, economic structure, transport and energy structure, air quality, and GHG emissions. An important feature of the TA is its help in organizing the collection of existing data from different stakeholders. Content for the website and the CitiesACT portal will be provided by the CAI-Asia Center, its country networks, and strategic knowledge partners.¹⁴
- (ii) **Maintenance of regional AQM COPs.** The TA aims to build and strengthen sustainable AQM COPs to enable knowledge transfer and the sharing of best practices. The COPs will be tied to an online community of professionals, or a “who’s who,” to develop governments’ capacity in decision making and assess its potential to supplement other approaches to capacity building.¹⁵ The TA will set up COPs in key areas where Asian cities need to take action in the coming years and where they lack information, especially regarding new policy areas. Initially, two COPs will be maintained: (i) co-benefits of AQM and climate change mitigation and (ii) sustainable urban transport. A full-time moderator will facilitate discussions in these COPs. Virtual meetings and webcasting will be actively used to ensure COP members’ active participation, which will help offset the carbon footprint created by face-to-face international workshops and meetings. The COPs will be important for assessing the information needs of the air quality, climate change, and sustainable transport community, as well as for capturing and transferring knowledge to be documented on the online portal. The TA will

¹² A portal is a website that provides links to other websites and may include data and information harvested from external sources.

¹³ The surveys will also determine stakeholders’ current ICT use. When necessary, quick, small follow-up surveys may periodically be conducted to evaluate and monitor how effective stakeholders use ICT for AQM, climate change co-benefits, and transport.

¹⁴ In addition to AQM, climate change, and transport, other topics likely to be covered include cleaner energy, biofuels, dust and sandstorms, transboundary air pollution, and ports.

¹⁵ This will be in the form of an online social network, discussion forum, or e-group.

conduct three case studies on how the proposed COPs can effectively contribute to building the capacity of policy makers and strengthening policy development processes related to AQM and climate change mitigation, thereby incorporating AQM and climate change in government policy documents. These will include one regional, one national, and one local case study. The topics of the three case studies will be linked to the two COPs established by the TA. The specific countries and cities to be studied will be determined at the inception stage of the TA in consultation with operational departments in ADB and national and regional agencies working on AQM and climate change mitigation.¹⁶ Toward the end of the case studies, a report on them will be prepared that includes an evaluation to determine which knowledge-sharing mechanism was most effective and which of the approaches needs to be improved. The results of the case studies will be disseminated to the AQM community through email, internet, and international meetings and workshops.

C. Cost and Financing

11. The TA is estimated to cost \$500,000, to be financed as a grant by the Japan Special Fund, funded by the Government of Japan. See Appendix 2 for the detailed cost estimates. Disbursements under the TA will be done in accordance with ADB's *Technical Assistance Disbursement Handbook* (2008, as amended from time to time).

D. Implementation Arrangements

12. ADB will be the Executing Agency, and the CAI-Asia Center will be the Implementing Agency. ADB will exercise administrative oversight through its Regional and Sustainable Development Department. The relationship will be governed by a written agreement between ADB and the CAI-Asia Center that will facilitate the implementation of the TA, including the engagement of consultants through the CAI-Asia Center.¹⁷ In 2001, ADB, World Bank, and US-Asia Environment Partnership (a project of the United States Agency for International Development) launched CAI-Asia, which has become the acknowledged regional convener and information-exchange facilitator on urban air quality in Asia, bringing policy makers together to share experiences. Through its extended network of members and partners, CAI-Asia has a unique capacity to act as a documenter of AQM trends in Asia, and the continued provision of these knowledge products and services is expected by DMCs in the region.¹⁸ CAI-Asia increasingly interacts with other, more general knowledge providers, especially in providing technical inputs into their knowledge management initiatives.¹⁹ In June 2007, the CAI-Asia Center was established as an independent nongovernment organization to act as the secretariat to the CAI-Asia partnership.²⁰

¹⁶ The final choice of case studies will be influenced by (i) local ownership and willingness to contribute to implementation and (ii) the possible contribution that ICT and the COP can make to the proposed case study. No work will commence in a DMC until a no-objection letter has been obtained for its participation in the TA.

¹⁷ ADB already has a letter of intent with the CAI-Asia Center.

¹⁸ The current website (www.cleanairnet.org/caiasia) receives over 500,000 hits per month, and the listserv has more than 1,250 members.

¹⁹ CAI-Asia was an active partner in the benchmarking study of AQM capability in Asian cities that was implemented by the Stockholm Environment Institute with support from ADB and the Korean Environment Institute. Also, the Health Effects Institute has collected a lot of data through the Public Health and Air Pollution in Asia–Science Access on the Net project, which was supported by CAI-Asia and ADB.

²⁰ See www.cleanairnet.org/caiasia/partnership and www.cleanairnet.org/caiasia/center

13. The TA will take a programmatic approach to support, not duplicate, activities already being undertaken by ADB and other regional organizations in Asia with respect to AQM²¹. The TA will integrate knowledge on AQM and sustainable transport initiatives managed by other organizations active in Asia. Toward implementing the TA, the CAL-Asia Center will seek to establish cooperation agreements with the Asia-Pacific Gateway to Climate and Development, Asia-Pacific Gateway, United Nations Environment Programme, United Nations Economic and Social Commission in Asia and the Pacific, International Atomic Energy Agency's Regional Cooperative Agreement Regional Office, and other organizations. It will strengthen the knowledge-management activities of the Association of Southeast Asian Nations (ASEAN) through the ASEAN Working Group on Environmentally Sustainable Cities. The TA will further complement and cooperate with relevant knowledge hubs established by ADB on reduce, reuse, and recycle (3Rs) energy, and climate change.²²

14. Sixty-nine person-months are required for this TA. For administrative efficiency, the engagement of consultants will be through the CAI-Asia Center and will follow the agreement mentioned above, which will require recruitment in accordance with ADB's *Guidelines on the Use of Consultants* (2007, as amended from time to time). All commercial software and equipment procured for this TA will be turned over to the CAI-Asia Center to help ensure the sustainability of the online portal and the COPs beyond TA completion. ADB will issue a certificate of turnover to be signed by the CAI-Asia Center.²³

IV. THE PRESIDENT'S DECISION

15. The President, acting under the authority delegated by the Board, has approved the provision of technical assistance not exceeding the equivalent of \$500,000 on a grant basis for Capturing and Transferring Air Quality Management Knowledge in Asia, and hereby reports this action to the Board.

²¹ No activities under this TA will commence until ADB has received a no-objection from the respective DMC, in which activities are planned.

²² For 3Rs the Asian Institute of Technology, for energy the Energy Research Institute, and for climate change Tsinghua University.

²³ Equipment includes at least one desktop computer. Possible other costs are for proprietary software licenses ranging from the operating system and database software (e.g., Windows XP Professional or higher, Microsoft SQL Server) and specific applications like Adobe Photoshop, Adobe Acrobat Professional, and anti-virus software, as well as web-hosting costs.

Design Summary	Performance Targets and/or Indicators	Data Sources and/or Reporting Mechanisms	Assumptions and Risks
<p>to share knowledge and good practices in AQM.</p>	<p>after 14 months.</p> <p>COPs are acknowledged by their respective communities as important discussion venues.</p> <p>Survey generates positive evaluation of COP activity and effectiveness.</p> <p>Three thematic areas are identified and actively discussed in COPs to help generate knowledge and share best practices that will subsequently be archived in the website.</p> <p>Three documented policy case studies at the regional, national, and local level are formulated and implemented with recommendations for possible replication in other cities.</p> <p>Dissemination of case studies and progress reports to specific target audiences is successfully carried out.</p>		
<p>Activities with Milestones</p> <ol style="list-style-type: none"> 1. Maintenance of AQM knowledge portal <ol style="list-style-type: none"> a. Baseline survey and consultation with stakeholders (3 months) b. Recruitment of information technology firm (3 months) c. Development of knowledge transfer platform (CitiesACT portal) (6 months) d. Website launch (2009) e. Promote portal to policy makers and at international events and other dissemination (2009–2010) 2. Maintenance of regional AQM COPs <ol style="list-style-type: none"> a. Development of two COPs (3 months) b. Linking of COPs to existing stakeholder networks (2009–2010) c. Identification of thematic areas for knowledge sharing (2009–2010) d. Development of monitoring mechanism to assess COP effectiveness (2 months) e. Capacity building for AQM policy makers (2009–2010) f. Identification of policy processes (3 months) g. Capacity building regionally, nationally, and locally (2009–2010) h. Evaluation of three case studies (2010) i. Dissemination of results of the case studies to AQM community (2010) 			<p>Inputs</p> <ul style="list-style-type: none"> • ADB <p>Consultants: \$378,000</p> <p>Software: \$26,000</p> <p>Training/seminars/conferences: \$41,000</p> <p>Miscellaneous: \$5,000</p> <p>Contingencies (10%): \$50,000</p> <p>Total: \$500,000</p>

ACT = air, climate, and transport, ADB = Asian Development Bank, AQM = air quality management, CAI-Asia = Clean Air Initiative for Asian Cities, COP = community of practice, DMC = developing member country

COST ESTIMATES AND FINANCING PLAN
(\$'000)

Item	Total Cost
Asian Development Bank Financing^a	
1. Consultants	
a. Remuneration and Per Diem	
i. International Consultants	135
ii. National Consultants	222
b. International and Local Travel	21
2. Equipment ^b	26
3. Training, Seminars, and Conferences	41
4. Miscellaneous Administration and Support Costs	5
5. Contingencies	50
Total	500

^a Financed by the Japan Special Fund, funded by the Government of Japan.

^b This budget assumes at least one desktop computer and the possibility of using proprietary software licenses ranging from the operating system and database (e.g., Windows XP Professional or higher, Microsoft SQL Server) to specific applications like Adobe Photoshop, Adobe Acrobat Professional, and anti-virus software. It includes web-hosting costs.

Source: Asian Development Bank estimates.

OUTLINE TERMS OF REFERENCE FOR CONSULTANTS

A. International Consultants (8 person-months)

1. Air Quality Management (AQM) Policy Consultant (3.5 person-months)

1. The consultant will be responsible for the following:

- (i) Oversee the implementation of the technical assistance (TA), which includes the letter of agreement that the Asian Development Bank (ADB) will enter into with the Clean Air Initiative for Asian Cities (CAI-Asia) Center, progress and financial reporting, and the recruitment and management of resource consultants.
- (ii) Monitor the key activities of national consultants engaged by the TA.
- (iii) Facilitate consultations with the AQM community and policy makers on AQM, climate change and sustainable urban transport (SUT) information needs and their preferred knowledge-sharing methods.
- (iv) Review the online portal to assess that information needs are met and the preferred online sharing methods are integrated.
- (v) Participate in relevant discussions of the communities of practice (COPs) on AQM and SUT.
- (vi) Identify at least one regional, one national, and one local case study in coordination with ADB that contribute to building the capacity of policy makers and strengthening policy development processes, using the online portal and the COPs.
- (vii) Manage the implementation of the policy development case studies, including, but not limited to, maintaining relationships with government agencies and other stakeholders involved in the case study, identifying resource speakers and additional facilitators for the case studies, and facilitating online meetings and webcasting.
- (viii) Prepare the report on the outcomes of the three policy development case studies and the evaluation of knowledge-sharing mechanisms.

2. Senior Information Technology Consultant (3 person-months)

2. The consultant must be highly proficient with Web 2.0 technologies, methodologies, and applications (including rich site syndication and “mashups”) and be able to communicate technical concepts to a nontechnical audience. He or she will preferably have in-depth experience working with development agencies and nongovernment organizations. He or she will be responsible for the following:

- (i) Take the technical lead in developing the new web portal.
- (ii) Provide inputs for designing the architecture of the new website to ensure scalability.
- (iii) Conduct and analyze a baseline stakeholder survey to assess the information needs of the AQM community, including stakeholder’s familiarity with using online tools.
- (iv) Review and evaluate the existing CAI-Asia website for strengths and weaknesses in organizing AQM and SUT data and information for different target audiences.
- (v) Review and select appropriate technology options for the new website and for the CitiesACT (for air, climate, and transport) portal and integrate online content for effectively.

- (vi) Participate in and provide inputs for the selection and recruitment of information technology national consultants.
- (vii) Produce a detailed report summarizing the results of the website evaluation and stakeholder survey, including specific recommendations.

3. Resource Persons (1.5 person-months, with three resource persons engaged for 2 weeks for the three case studies)

3. The resource persons will be responsible for the following:
- (i) Provide technical inputs on AQM, SUT, climate change, or other related areas in the three capacity-building case studies on policy development.
 - (ii) Participate as resource speakers in virtual meetings and webinars (web seminars).
 - (iii) Facilitate discussions within selected COPs.
 - (iv) Contribute to the report on the outcomes of the three policy-development case studies and the evaluation of knowledge-sharing mechanisms.

B. National Consultants (56 person-months)

1. Knowledge-Management Specialist (15 person-months)

4. The consultant will be responsible for the following:
- (i) Implement the KnowledgeAir project day to day in coordination with the ADB project officer.
 - (ii) Supervise and manage the deliverables of the senior and junior programmer with respect to website development.
 - (iii) Develop and maintain the knowledge portal and regional COPs on AQM and SUT.
 - (iv) Conduct surveys assessing the knowledge needs of the AQM and SUT communities with the policy development specialist.
 - (v) Coordinate with the international information technology consultant on the structure and design of the system architecture of the web portal.
 - (vi) Manage and edit the content and reports to be uploaded to the new web portal.
 - (vii) Moderate COPs on AQM and SUT and participate in selected online discussions.
 - (viii) Document the progress of the TA and produce periodic project updates for ADB's Regional and Sustainable Development Department.
 - (ix) Implement knowledge-sharing activities with strategic partners that work on specific projects.
 - (x) Set up virtual meetings for the COPs on AQM and SUT in relation to the three policy development case studies, e.g., webcasts, video conferences, and online forums.
 - (xi) Disseminate the results of the three policy development case studies to stakeholders.
 - (xii) Edit fact sheets and one-pagers produced by AQM and transport researchers.
 - (xiii) Identify e-learning opportunities for AQM stakeholders.

2. Senior Programmer (6 person-months)

5. The consultant will use his or her expertise on Web 2.0 technologies, basic graphic design, and application programming interface development (expertise should include hypertext markup language, extensible markup language, cascading style sheets, Microsoft .NET

framework, active server pages, hypertext preprocessor programming, structured query language, and other skills sets to be determined by senior information technology consultant) to carry out the following tasks:

- (i) Work with the knowledge-management specialist in developing the system architecture of the web portal and database.
- (ii) Scope, design, and develop website and database technical specifications in coordination with the knowledge-management specialist.
- (iii) Supervise the junior programmer in implementing technical specifications.

3. Junior Programmer (19 person-months)

6. The consultant will use the same expertise and skills set as the senior programmer to carry out the following tasks:

- (i) Design and develop the web portal according to specifications determined by the knowledge-management specialist and the senior programmer.
- (ii) Upload data and information to the web portal.
- (iii) Provide web upgrades and additional features incrementally.
- (iv) Format documents for the web portal (e.g., PDF conversions, shrinking PowerPoint presentations).
- (v) Provide technical support for the CAI-Asia Center.

4. AQM Researcher (8 person-months)

7. The consultant will be responsible for the following:

- (i) Assess and summarize current information on AQM and climate change and methods of sharing AQM knowledge in preparation of consultations with and surveys of the AQM community and policy makers.
- (ii) Collect key data and information at the national and city level on AQM, climate change, and energy from country networks, strategic knowledge partners, and other authoritative sources for inclusion in the online portal. Data and information includes statistics, policies, projects, programs, initiatives, training courses and events, news items, strategies, and technologies.
- (iii) Write short fact sheets and one-pagers on selected topics and cities.
- (iv) Participate in discussions of the AQM COP.
- (v) Support the AQM policy consultant and policy development specialist in identifying relevant policy makers and stakeholders for inclusion in the COP for AQM.
- (vi) Assist the international AQM policy consultant with policy development case studies relevant to AQM and climate change.

5. Transport Researcher (8 person-months)

8. The consultant will be responsible for the following:

- (i) Assess and summarize current information on SUT and methods of sharing AQM knowledge in preparation for consultations with and surveys of the AQM community and policy makers.
- (ii) Collect key data at the national and city level on SUT, climate change, and energy from country networks, strategic knowledge partners, and other authoritative sources for inclusion in the online portal. Data and information includes statistics, policies, projects, programs, initiatives, training courses and events, news items, strategies, and technologies.

- (iii) Write short fact sheets and one-pagers on selected topics and cities.
- (iv) Participate in relevant discussions of the SUT COP.
- (v) Support the AQM policy consultant and the policy development specialist in identifying relevant policy makers and stakeholders for inclusion in the COP for AQM.
- (vi) Assist the international AQM and transport consultant on case studies.
- (vii) Assist the international AQM policy consultant on policy development case studies relevant to SUT.

6. Policy Development Specialist (5 person-months)

9. The consultant will be responsible for the following:
- (i) Assist the AQM policy consultant in consultations with the AQM community and policy makers on AQM, climate change, and SUT information needs and their preferred knowledge-sharing methods.
 - (ii) Conduct surveys assessing the knowledge needs of the AQM and SUT community together with the knowledge-management specialist and the CAI-Asia country networks.
 - (iii) Participate in discussions of the COP on AQM and SUT.
 - (iv) Support the AQM policy consultant in identifying and implementing policy development case studies, identifying resource persons, and preparing the case study report.
 - (v) Be the liaison for collecting information and data on SUT, climate change, and energy from CAI-Asia country networks specifically related to national and local policies and government agencies.
 - (vi) Coordinate raising public awareness of the portal and COPs and the dissemination of case study results through CAI-Asia country networks.